

Application No.: 10/081,266

Case No.: 56372US010

Remarks

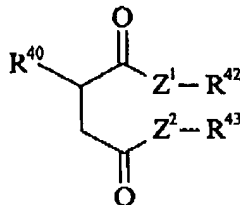
Claims 1-26 are pending. Claims 16-26 have been withdrawn from consideration.

§ 102/103 Rejections

Claims 1-4 and 7-14 stand rejected under 35 USC § 102(b) as being anticipated by or, in the alternative, under 35 USC § 103(a) as obvious over Deviny (US 5,883,208). Deviny discloses an initiation polymerization system for acrylic monomers comprising an organoborane amine complex and decomplexers containing at least one anhydride group.

Independent claim 1 is directed to a polymerizable system comprising:

- (a) an organoborane;
- (b) at least one polymerizable monomer; and
- (c) a work-life extending agent according to the general formula:



wherein R^{40} is $CH_2=$ or alkenyl, Z^1 and Z^2 are independently O, N- R^{41} or S, and R^{41} , R^{42} and R^{43} are independently H, alkyl, aryl or cycloalkyl,

provided that when Z^1 and Z^2 are O, R^{42} and R^{43} are independently alkyl, aryl or cycloalkyl.

Contrary to the Examiner's assertion, an anhydride does not fall into the scope of the work-life extending agent recited in Claim 1. An anhydride group is illustrated by the following group:



with each carbon maintaining an available bond for bonding to other groups.

The work-life extending agent in Claim 1 does not encompass anhydride groups. Therefore, Claim 1 is not anticipated by Deviny. Claims 2, 3, and 7-14 depend, directly or indirectly from claim 1.

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Claim 4 recites at least 2.5 weight percent of itaconic acid, itaconic acid derivatives or combinations thereof, which includes itaconic anhydride. However, Deviny only teaches itaconic anhydride at a maximum of 2.0% (See Example 21 of Deviny). Therefore, claim 4 is also not anticipated by Deviny.

The Examiner has also stated that the claims are, in the alternative, obvious over Deviny. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Deviny provides no motivation for one to use a work-life extending agent of the type recited in Claim 1. Deviny only teaches decomplexing agents that are anhydrides. Therefore, Claim 1 is not obvious over Deviny. Claims 2, 3, and 7-14 depend, directly or indirectly from claim 1.

Additionally, with respect to claim 4, Deviny teaches away from using at least 2.5 weight percent of itaconic acid, itaconic acid derivatives or combinations thereof. Deviny states, at Column 9, lines 30-33, that large amounts of the decomplexer, which includes itaconic anhydride, may permit the polymerization process to proceed too quickly, resulting in inadequate adhesion to low energy surfaces. The maximum decomplexer taught is 2.0% by weight (see e.g. Examples 18-21.) Therefore, Claim 4 is not obvious over Deviny.

The rejection of claims 1-4 and 7-14 under 35 USC § 102(b) as being anticipated by or, in the alternative, under 35 USC § 103(a) as obvious over Deviny has been overcome and should be withdrawn.

Claims 1-5, 7-10 and 12-15 stand rejected under 35 USC § 102(b) as being anticipated by or, in the alternative, under 35 USC § 103(a) as obvious over WO 99/64475.

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WO 99/64475 discloses an initiator system for making adhesive compositions, comprising an organoborane and a decomplexer represented by one of two structures, and optionally a second carboxylic acid decomplexer. The Examiner states that the structure (I) clearly encompasses the work-life extending agent of claims 1 and 4-5.

The decomplexing agents shown in both structures (I) and (II) are carboxylic acid agents. This is evidenced by the COOH group in both structures. Work-life extending agent recited in Claim 1 is not a carboxylic acid. Claim 1 expressly states that when Z^1 and Z^2 are O, R^{42} and R^{43} are independently alkyl, aryl or cycloalkyl, not hydrogen. Therefore, carboxylic acids are not encompassed by Claim 1.

Claim 4 recites a work-life extending agent that is least 2.5 weight percent of itaconic acid, itaconic acid derivatives or combinations thereof. Itaconic acid is not described specifically in WO 99/64475.

The Examiner has also stated that the claims are, in the alternative, obvious over WO99/64475.

WO99/64475 provides no motivation for one to use a work-life extending agent of the type recited in Claim 1. WO99/64475 only teaches decomplexing agents that are acids. Therefore, Claim 1 is not obvious over WO99/64475. Claims 2, 3, 5 and 7-20 and 12-15 depend, directly or indirectly, from claim 1.

Additionally, with respect to claim 4, WO99/64475 provides no motivation to use at least 2.5 weight percent of itaconic acid, itaconic acid derivatives or combinations thereof. None of the Examples use itaconic acid, itaconic acid derivatives or combinations thereof as a decomplexing agent. Additionally, WO99/64475 states that the use of too much decomplexer may not be beneficial to the resulting adhesive. Therefore, given the disclosure of WO99/64475, there is no reasonable expectation that over 2.5 weight percent of itaconic acid, itaconic acid derivatives or combinations thereof would work. Claim 4 is not obvious over WO99/64475.

The rejection of claims 1-5, 7-10 and 12-15 under 35 USC § 102(b) as being anticipated by or, in the alternative, under 35 USC § 103(a) as obvious over WO 99/64475 has been overcome and should be withdrawn.

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§ 103 Rejections

Claim 6 stands rejected under 35 USC § 103(a) as being unpatentable over WO 99/64475 for the reasons stated in the preceding paragraph and further in view of the following.

However, as stated above, WO99/64475 fails to teach the limitation of using at least 2.5 weight percent of the itaconic acid and its derivatives.

The rejection of claim 6 under 35 USC § 103(a) as being unpatentable over WO 99/64475 has been overcome and should be withdrawn.

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration of the application is requested.

Allowance of claims 1-15, as amended, at an early date is solicited.

February 5, 2004
Date

Respectfully submitted,

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